

RESPONSIVE AEROELASTIC SLIDER

ABSTRACT OF THE DISCLOSURE

One embodiment of the present invention pertains to a slider that includes
5 a substrate, a transducer tip disposed on the substrate, and a hydrodynamic
surface including a responsive aeroelastic deposit. The substrate has a first
coefficient of expansion responsive to a stimulus. The transducer tip has having a
second coefficient of expansion responsive to the stimulus that is greater than the
first coefficient of expansion. The aeroelastic deposit has a third coefficient of
10 expansion responsive to the stimulus that is greater than the first coefficient of
expansion. The responsive aeroelastic deposit allows the slider to alter its flight
characteristics responsively and elastically to changing operating conditions.